THE THOMSON CORP on STN ANSWER 10 OF 10 WPIX COPYRIGHT 2007 L11998-251866 [23] WPIX ACCESSION NUMBER: CROSS REFERENCE: 1998-241420; 1998-251865; 1998-251864 C1998-078542 [23] DOC. NO. CPI: New 1-substituted-(substituted (hetero)aryl)-TITLE: fused pyrazole compounds - useful as cardiovascular agents, (vasodilators) for treatment of hypertension, cardiac insufficiency, angina, arrhythmias, ischaemia, DERWENT CLASS: B02 ARLT D; DEMBOWSKY K; FEURER A; FUERSTNER C; INVENTOR: FURSTNER C; HUETTER J; HUTTER J; JAETSCH T; KAST R; NIEWOEHNER U; NIEWOHNER U; PERZBORN E; ROBYR C; STASCH J; STRAUB A (FARB-C) BAYER AG; (FARB-C) BAYER HEALTHCARE AG PATENT ASSIGNEE: COUNTRY COUNT: 79 PATENT INFO ABBR.: PATENT NO KIND DATE WEEK LA PG MAIN IPC ______ DE 19642323 A1 19980416 (199823)* DE 14[0] <--WO 9816507 A2 19980423 (199823) DE <--AU 9749430 A 19980511 (199837) EN NO 9901732 A 19990604 (199932) NO A3 19990714 (199933) CS CZ 9901309 A2 19990811 (199936) DE EP 934311 SK 9900487 A3 20000214 (200020) SK A 20000112 (200022) ZH CN 1241188 BR 9712523 A 20000509 (200033) PT US 6166027 A 20001226 (200103) EN MX 9903479 A1 20000101 (200115) ES 254 JP 2001505550 W 20010424 (200130) JA HU 2000001115 A2 20010428 (200131) HU AU 736303 B 20010726 (200149) EN NZ 335092 A 20020201 (200214) EN A 20020201 (200214) EN

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US 6387940

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US 6414009

US 6462068

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DE 19642323 A1 DE 1996-19642323 19961014 AU 9749430 A AU 1997-49430 19971002 AU 736303 B AU 1997-49430 19971002 BR 9712523 A BR 1997-12523 19971002 CN 1241188 A CN 1997-180638 19971002 EP 934311 A2 EP 1997-912102 19971002 NZ 335092 A NZ 1997-335092 19971002 WO 9816507 A2 ***WO 1997-EP5432 19971002*** NO 9901732 A WO 1997-EP5432 19971002 CZ 9901309 A3 WO 1997-EP5432 19971002 EP 934311 A2 WO 1997-EP5432 19971002 SK 9900487 A3 WO 1997-EP5432 19971002 BR 9712523 A WO 1997-EP5432 19971002 US 6166027 A WO 1997-EP5432 19971002 JP 2001505550 W WO 1997-EP5432 19971002 HU 2000001115 A2 WO 1997-EP5432 19971002 NZ 335092 A WO 1997-EP5432 19971002 US 6387940 B1 Div Ex US 6410740 B1 Div Ex US 6414009 B1 Div Ex US 6462068 B1 Div Ex MX 207802 B WO 1997-EP5432 19971002 TW 1997-115204 19971014 TW 504513 A JP 1998-517971 19971002 JP 2001505550 W CZ 9901309 A3 CZ 1999-1309 19971002 SK 9900487 A3 SK 1999-487 19971002 US 6166027 A US 1999-284172 19990409 US 1999-1732 19990413 US 6387940 B1 Div Ex US 6410740 B1 Div Ex US 6414009 B1 Div Ex US 6462068 B1 Div Ex NO 9901732 A NO 1999-1732 19990413 MX 9903479 A1 MX 1999-3479 19990414 MX 207802 B MX 1999-3479 19990414 HU 2000001115 A2 HU 2000-1115 19971002 US 6387940 B1 US 2000-644179 20000823 US 6462068 B1 US 2000-644305 20000823 US 6410740 B1 US 2000-645834 20000825 US 2000-648082 20000825 EP 1997-912102 19980423 EP 2005-22495 19971002 US 6414009 B1 EP 1686127 Al Div Ex EP 2005-22495 19971002 EP 1686127 A1 FILING DETAILS:

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     1998-241420; 1998-251865; 1998-251864
     DE 19642323 A1
                      UPAB: 20060114
AΒ
     1-(Benzyl or heterocyclylmethyl)-3-(substituted (hetero)aromatic)-
fused
     pyrazole compounds of formula (I) are new. X = O, S NH or CH=CH,
and the
     X-containing ring is optionally substituted by R14; R1 = phenyl,
     2-thienyl, 2-pyrrolyl or 2-furanyl, all substituted by R4; R4 =
CHOHCH3,
     2-6C alkyl (substituted by OH or 1-4C alkoxy), CHO, 1-6C acyl,
NO2, 1-6C
     alkyl (optionally substituted by NH2, N3 or OR5), CH2OR13, or a
group of
     formula (a) or (b); A = phenyl (optionally mono-, di- or
trisubstituted by
     alkyl, alkoxy, alkoxycarbonyl, (each with up to 6C), COOH, NO2,
     N3 or halo; R5 = 1-5C acyl, SiR6R7R8, CH2OR10 or a group of
formula (c);
     R6-R8 = 6-10C \text{ aryl}, 1-6C \text{ alkyl}; R9, R13 = H \text{ or } 1-3C \text{ alkyl}; R10-R12
     1-4C alkyl; R14 = OH, halo, 1-4C alkoxy or 1-4C alkyl; a = 1-3:
provided
     that when R4 = CH2OR13, then A = substituted phenyl where the
substituents
     include alkoxycarbonyl, COOH, NO2, CN, CF3 or N3.
           USE - (I), and combinations of (I) with organic nitrate
     and/or NO donors are used in therapeutics; (I) are used to treat
     cardiovascular disease (claimed). (I) relax blood vessels, inhibit
     thrombocyte aggregation, reduce blood pressure and increase
coronary blood
     flow by directly stimulating soluble guanylate cyclase and
increasing
     intracellular cGMP levels. (I) increase the effects of substances
that
     increase cGMP levels, such as endothelium-derived relaxing factor,
     NO-donors, protoporphyrin IX, arachidonic acid and phenylhydrazine
     derivatives. They can be used in human and veterinary medicine for
the
     treatment of hypertension, cardiac insufficiency, angina,
arrhythmias,
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thromboembolic disorders, ischaemias, (myocardial infarction and stroke),

peripheral perfusion disorders, arteriosclerosis, prostate hypertrophy,

erectile dysfunction and incontinence and for the prevention of restenosis

after angioplasty. - Daily dose is $0.5-500~\mathrm{mg/kg}$, preferably $5-100~\mathrm{mg/kg}$.

Member (0002)

the

ABEQ WO 1998016507 A2 UPAB 20060114

1-(Benzyl or heterocyclylmethyl)-3-(substituted (hetero)aromatic)-fused

pyrazole compounds of formula (I) are new. X = O, S NH or CH=CH, and the

X-containing ring is optionally substituted by R14; R1 = phenyl, 2-thienyl, 2-pyrrolyl or 2-furanyl, all substituted by R4; R4 = CHOHCH3,

2-6C alkyl (substituted by OH or 1-4C alkoxy), CHO, 1-6C acyl, NO2, 1-6C $\,$

alkyl (optionally substituted by NH2, N3 or OR5), CH2OR13, or a group of $\,$

formula (a) or (b); A = phenyl (optionally mono-, di- or trisubstituted by

alkyl, alkoxy, alkoxycarbonyl, (each with up to 6C), COOH, NO2, CN, CF3,

N3 or halo; R5 = 1-5C acyl, SiR6R7R8, CH2OR10 or a group of formula (c);

R6-R8 = 6-10C aryl, 1-6C alkyl; R9, R13 = H or 1-3C alkyl; R10-R12= H or

1-4C alkyl; R14 = OH, halo, 1-4C alkoxy or 1-4C alkyl; a = 1-3: provided

that when R4 = CH2OR13, then A = substituted phenyl where the substituents

include alkoxycarbonyl, COOH, NO2, CN, CF3 or N3.

USE - (I), and combinations of (I) with organic nitrate compounds $\ensuremath{\mathsf{Compounds}}$

and/or NO donors are used in therapeutics; (I) are used to treat cardiovascular disease (claimed). (I) relax blood vessels, inhibit thrombocyte aggregation, reduce blood pressure and increase coronary blood

flow by directly stimulating soluble guanylate cyclase and increasing

intracellular cGMP levels. (I) increase the effects of substances that $\ensuremath{\mathsf{CGMP}}$

increase cGMP levels, such as endothelium-derived relaxing factor, NO-donors, protoporphyrin IX, arachidonic acid and phenylhydrazine derivatives. They can be used in human and veterinary medicine for

treatment of hypertension, cardiac insufficiency, angina, arrhythmias,

thromboembolic disorders, ischaemias, (myocardial infarction and stroke),

peripheral perfusion disorders, arteriosclerosis, prostate hypertrophy,

erectile dysfunction and incontinence and for the prevention of restenosis

after angioplasty. - Daily dose is 0.5--500~mg/kg, preferably 5--100~mg/kg.

Member (0006)

ABEQ EP 934311 A2 UPAB 20060114

1-(Benzyl or heterocyclylmethyl)-3-(substituted (hetero)aromatic)-fused

pyrazole compounds of formula (I) are new. X = O, S NH or CH=CH, and the

X-containing ring is optionally substituted by R14; R1 = phenyl, 2-thienyl, 2-pyrrolyl or 2-furanyl, all substituted by R4; R4 = CHOHCH3,

2-6C alkyl (substituted by OH or 1-4C alkoxy), CHO, 1-6C acyl, NO2, 1-6C $\,$

alkyl (optionally substituted by NH2, N3 or OR5), CH2OR13, or a group of $\,$

formula (a) or (b); A = phenyl (optionally mono-, di- or trisubstituted by

alkyl, alkoxy, alkoxycarbonyl, (each with up to 6C), COOH, NO2, CN, CF3,

N3 or halo; R5 = 1-5C acyl, SiR6R7R8, CH2OR10 or a group of formula (c);

R6-R8 = 6-10C aryl, 1-6C alkyl; R9, R13 = H or 1-3C alkyl; R10-R12 = H or 1-3C alkyl; R10-

1-4C alkyl; R14 = OH, halo, 1-4C alkoxy or 1-4C alkyl; a = 1-3: provided

that when R4 = CH2OR13, then A = substituted phenyl where the substituents

include alkoxycarbonyl, COOH, NO2, CN, CF3 or N3.

 $\mbox{USE - (I), and combinations of (I) with organic nitrate} \label{eq:use-compounds}$

and/or NO donors are used in therapeutics; (I) are used to treat cardiovascular disease (claimed). (I) relax blood vessels, inhibit thrombocyte aggregation, reduce blood pressure and increase coronary blood

flow by directly stimulating soluble guanylate cyclase and increasing

intracellular cGMP levels. (I) increase the effects of substances that $% \left(1\right) =\left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right) +\left(1\right) \left(1\right) +\left(1\right$

increase cGMP levels, such as endothelium-derived relaxing factor, NO-donors, protoporphyrin IX, arachidonic acid and phenylhydrazine derivatives. They can be used in human and veterinary medicine for the

treatment of hypertension, cardiac insufficiency, angina, arrhythmias,

thromboembolic disorders, ischaemias, (myocardial infarction and stroke),

peripheral perfusion disorders, arteriosclerosis, prostate hypertrophy,

erectile dysfunction and incontinence and for the prevention of restenosis

after angioplasty. - Daily dose is 0.5-500 mg/kg, preferably 5-100 mg/kg.

Member (0008)

ABEQ CN 1241188 A UPAB 20060114

1-(Benzyl or heterocyclylmethyl)-3-(substituted (hetero)aromatic)-fused

pyrazole compounds of formula (I) are new. X = O, S NH or CH=CH, and the

X-containing ring is optionally substituted by R14; R1 = phenyl, 2-thienyl, 2-pyrrolyl or 2-furanyl, all substituted by R4; R4 = CHOHCH3,

2-6C alkyl (substituted by OH or 1-4C alkoxy), CHO, 1-6C acyl, NO2, 1-6C

alkyl (optionally substituted by NH2, N3 or OR5), CH2OR13, or a group of $\,$

formula (a) or (b); A = phenyl (optionally mono-, di- or trisubstituted by

alkyl, alkoxy, alkoxycarbonyl, (each with up to 6C), COOH, NO2, CN, CF3,

N3 or halo; R5 = 1-5C acyl, SiR6R7R8, CH2OR10 or a group of formula (c);

R6-R8 = 6-10C aryl, 1-6C alkyl; R9, R13 = H or 1-3C alkyl; R10-R12 = H or

1-4C alkyl; R14 = OH, halo, 1-4C alkoxy or 1-4C alkyl; a = 1-3: provided

that when R4 = CH2OR13, then A = substituted phenyl where the substituents

include alkoxycarbonyl, COOH, NO2, CN, CF3 or N3.

USE - (I), and combinations of (I) with organic nitrate compounds $\label{eq:compounds}$

and/or NO donors are used in therapeutics; (I) are used to treat cardiovascular disease (claimed). (I) relax blood vessels, inhibit thrombocyte aggregation, reduce blood pressure and increase coronary blood

flow by directly stimulating soluble guanylate cyclase and increasing $% \left(1\right) =\left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left($

intracellular cGMP levels. (I) increase the effects of substances that $% \left(1\right) =\left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right) +\left(1\right) \left(1\right) +\left(1\right$

increase cGMP levels, such as endothelium-derived relaxing factor, NO-donors, protoporphyrin IX, arachidonic acid and phenylhydrazine derivatives. They can be used in human and veterinary medicine for the

treatment of hypertension, cardiac insufficiency, angina, arrhythmias,

thromboembolic disorders, ischaemias, (myocardial infarction and stroke),

peripheral perfusion disorders, arteriosclerosis, prostate hypertrophy,

erectile dysfunction and incontinence and for the prevention of restenosis

after angioplasty. - Daily dose is 0.5--500~mg/kg, preferably 5--100~mg/kg.

Member (0010)

ABEQ US 6166027 A UPAB 20060114

1-(Benzyl or heterocyclylmethyl)-3-(substituted (hetero)aromatic)-fused

pyrazole compounds of formula (I) are new. X = O, S NH or CH=CH, and the

X-containing ring is optionally substituted by R14; R1 = phenyl,

2-thienyl, 2-pyrrolyl or 2-furanyl, all substituted by R4; R4 = CHOHCH3,

2-6C alkyl (substituted by OH or 1-4C alkoxy), CHO, 1-6C acyl, NO2. 1-6C

alkyl (optionally substituted by NH2, N3 or OR5), CH2OR13, or a group of $\,$

formula (a) or (b); A = phenyl (optionally mono-, di- or trisubstituted by

alkyl, alkoxy, alkoxycarbonyl, (each with up to 6C), COOH, NO2, CN, CF3,

N3 or halo; R5 = 1-5C acyl, SiR6R7R8, CH2OR10 or a group of formula (c);

R6-R8 = 6-10C aryl, 1-6C alkyl; R9, R13 = H or 1-3C alkyl; R10-R12 = H or

1-4C alkyl; R14 = OH, halo, 1-4C alkoxy or 1-4C alkyl; a = 1-3: provided

that when R4 = CH2OR13, then A = substituted phenyl where the substituents

include alkoxycarbonyl, COOH, NO2, CN, CF3 or N3.

USE - (I), and combinations of (I) with organic nitrate compounds $\label{eq:compounds}$

and/or NO donors are used in therapeutics; (I) are used to treat cardiovascular disease (claimed). (I) relax blood vessels, inhibit thrombocyte aggregation, reduce blood pressure and increase coronary blood

flow by directly stimulating soluble guanylate cyclase and increasing

intracellular cGMP levels. (I) increase the effects of substances that

increase cGMP levels, such as endothelium-derived relaxing factor, NO-donors, protoporphyrin IX, arachidonic acid and phenylhydrazine derivatives. They can be used in human and veterinary medicine for

treatment of hypertension, cardiac insufficiency, angina, arrhythmias,

thromboembolic disorders, ischaemias, (myocardial infarction and stroke),

peripheral perfusion disorders, arteriosclerosis, prostate hypertrophy,

erectile dysfunction and incontinence and for the prevention of restenosis

after angioplasty. - Daily dose is $0.5-500~\mathrm{mg/kg}$, preferably $5-100~\mathrm{mg/kg}$.

Member (0012)

the

ABEQ JP 2001505550 W UPAB 20060114

1-(Benzyl or heterocyclylmethyl)-3-(substituted (hetero)aromatic)-fused

pyrazole compounds of formula (I) are new. X = O, S NH or CH=CH, and the

X-containing ring is optionally substituted by R14; R1 = phenyl, 2-thienyl, 2-pyrrolyl or 2-furanyl, all substituted by R4; R4 = CHOHCH3,

2-6C alkyl (substituted by OH or 1-4C alkoxy), CHO, 1-6C acyl, NO2, 1-6C

alkyl (optionally substituted by NH2, N3 or OR5), CH2OR13, or a group of $\,$

formula (a) or (b); A = phenyl (optionally mono-, di- or trisubstituted by

alkyl, alkoxy, alkoxycarbonyl, (each with up to 6C), COOH, NO2, CN, CF3,

N3 or halo; R5 = 1-5C acyl, SiR6R7R8, CH2OR10 or a group of formula (c);

R6-R8 = 6-10C aryl, 1-6C alkyl; R9, R13 = H or 1-3C alkyl; R10-R12 = H or

1-4C alkyl; R14 = OH, halo, 1-4C alkoxy or 1-4C alkyl; a = 1-3: provided

that when R4 = CH2OR13, then A = substituted phenyl where the substituents

include alkoxycarbonyl, COOH, NO2, CN, CF3 or N3.

 $\label{eq:USE-(I), and combinations of (I) with organic nitrate compounds} \\$

and/or NO donors are used in therapeutics; (I) are used to treat cardiovascular disease (claimed). (I) relax blood vessels, inhibit thrombocyte aggregation, reduce blood pressure and increase coronary blood

flow by directly stimulating soluble guanylate cyclase and increasing

intracellular cGMP levels. (I) increase the effects of substances that $% \left(1\right) =\left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right) +\left(1\right) \left(1\right) +\left(1\right$

increase cGMP levels, such as endothelium-derived relaxing factor, NO-donors, protoporphyrin IX, arachidonic acid and phenylhydrazine derivatives. They can be used in human and veterinary medicine for the

treatment of hypertension, cardiac insufficiency, angina, arrhythmias,

thromboembolic disorders, is chaemias, (myocardial infarction and stroke),

peripheral perfusion disorders, arteriosclerosis, prostate hypertrophy,

erectile dysfunction and incontinence and for the prevention of restenosis

after angioplasty. - Daily dose is 0.5-500 mg/kg, preferably 5-100 mg/kg.